

## POTOMAC RIVER BASIN

## 01660000 SOUTH BRANCH CHOPAWAMSIK CREEK NEAR GARRISONVILLE, VA

**LOCATION.**--Lat 38°32'22", long 77°25'30", NAD83, Stafford County, Hydrologic Unit 02070011, on left bank, 10 ft downstream of Highway MCB-1, 1.8 mi upstream from Chopawamsic Creek, and 4.3 mi north of Garrisonville.

**DRAINAGE AREA.**--2.56 mi<sup>2</sup>.

**PERIOD OF RECORD.**--May 1951 to June 1957, September 1989 to September 1992 (annual maximum only), March 2000 to current year.

**GAGE.**--Water stage recorder. Datum of gage is 207.01 ft above sea level. May 1951 to September 1992, at site 200 ft downstream at different datum.

**REMARKS.**--Records fair except for period with ice effect Dec. 24, 2000 to Jan. 9, 2001, and for discharges above 40 ft<sup>3</sup>/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	1.1	2.9	1.2	1.0	.62	.83
2	---	---	---	---	---	---	1.1	2.6	1.2	.91	.54	1.7
3	---	---	---	---	---	---	1.3	2.4	1.4	.86	.58	17
4	---	---	---	---	---	---	2.1	2.2	1.1	1.0	11	2.1
5	---	---	---	---	---	---	1.4	2.1	1.0	.94	1.5	.92
6	---	---	---	---	---	---	1.1	2.0	1.4	.86	1.7	.72
7	---	---	---	---	---	---	.99	1.9	1.1	.80	1.1	.64
8	---	---	---	---	---	---	6.5	1.8	.97	.76	.73	.56
9	---	---	---	---	---	---	8.1	1.6	.92	.75	.62	.54
10	---	---	---	---	---	---	2.5	1.6	.87	.88	.58	.54
11	---	---	---	---	---	---	1.9	1.6	.83	.87	.53	.61
12	---	---	---	---	---	---	1.8	1.4	.84	.81	.49	.61
13	---	---	---	---	---	---	1.5	1.5	.93	.78	.60	.54
14	---	---	---	---	---	.97	1.5	1.8	.96	.83	.56	.50
15	---	---	---	---	---	.92	1.5	1.3	1.1	17	.50	.49
16	---	---	---	---	---	.95	1.6	1.3	1.3	.88	.48	.48
17	---	---	---	---	---	1.5	13	1.2	5.1	.63	.45	.46
18	---	---	---	---	---	.99	15	1.2	3.3	.50	.54	.44
19	---	---	---	---	---	.94	5.8	1.3	2.3	1.4	.51	.76
20	---	---	---	---	---	.95	3.3	1.5	1.4	5.8	.46	.67
21	---	---	---	---	---	9.2	26	1.5	1.2	.74	.44	.52
22	---	---	---	---	---	5.0	10	3.3	1.8	.57	.44	.47
23	---	---	---	---	---	2.7	5.4	1.8	1.2	.53	.42	.47
24	---	---	---	---	---	1.9	4.2	1.5	1.0	.55	.44	.47
25	---	---	---	---	---	1.7	15	1.5	.95	.55	.48	5.3
26	---	---	---	---	---	1.6	6.2	1.3	.91	.58	.43	5.0
27	---	---	---	---	---	1.9	4.6	1.2	.91	.55	.46	.97
28	---	---	---	---	---	2.8	3.9	1.4	1.3	5.8	.52	.69
29	---	---	---	---	---	1.8	3.4	1.5	1.5	1.8	.48	.61
30	---	---	---	---	---	1.4	3.1	1.3	1.5	1.2	.55	.57
31	---	---	---	---	---	1.2	---	1.2	---	.85	.74	---
TOTAL	---	---	---	---	---	---	154.89	52.7	41.49	51.98	29.49	46.18
MEAN	---	---	---	---	---	---	5.16	1.70	1.38	1.68	.95	1.54
MAX	---	---	---	---	---	---	26	3.3	5.1	17	11	17
MIN	---	---	---	---	---	---	.99	1.2	.83	.50	.42	.44
CFSM	---	---	---	---	---	---	2.02	.66	.54	.65	.37	.60
IN.	---	---	---	---	---	---	2.25	.77	.60	.76	.43	.67

## 01660000 SOUTH BRANCH CHOPAWAMSIK CREEK NEAR GARRISONVILLE, VA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1957, 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.13	1.97	2.07	2.50	2.94	5.10	4.08	1.91	1.70	1.18	1.51	.84
MAX	1.81	5.42	3.71	4.34	4.22	9.37	7.48	3.70	4.12	1.78	6.58	1.69
(WY)	1954	1953	1952	1952	1957	1953	1952	1953	1951	1956	1955	1952
MIN	.23	.40	.79	.88	1.28	3.47	1.77	1.06	.48	.64	.34	.027
(WY)	1955	1955	1956	1955	1954	1954	1954	1957	1954	1953	1953	1954

## SUMMARY STATISTICS

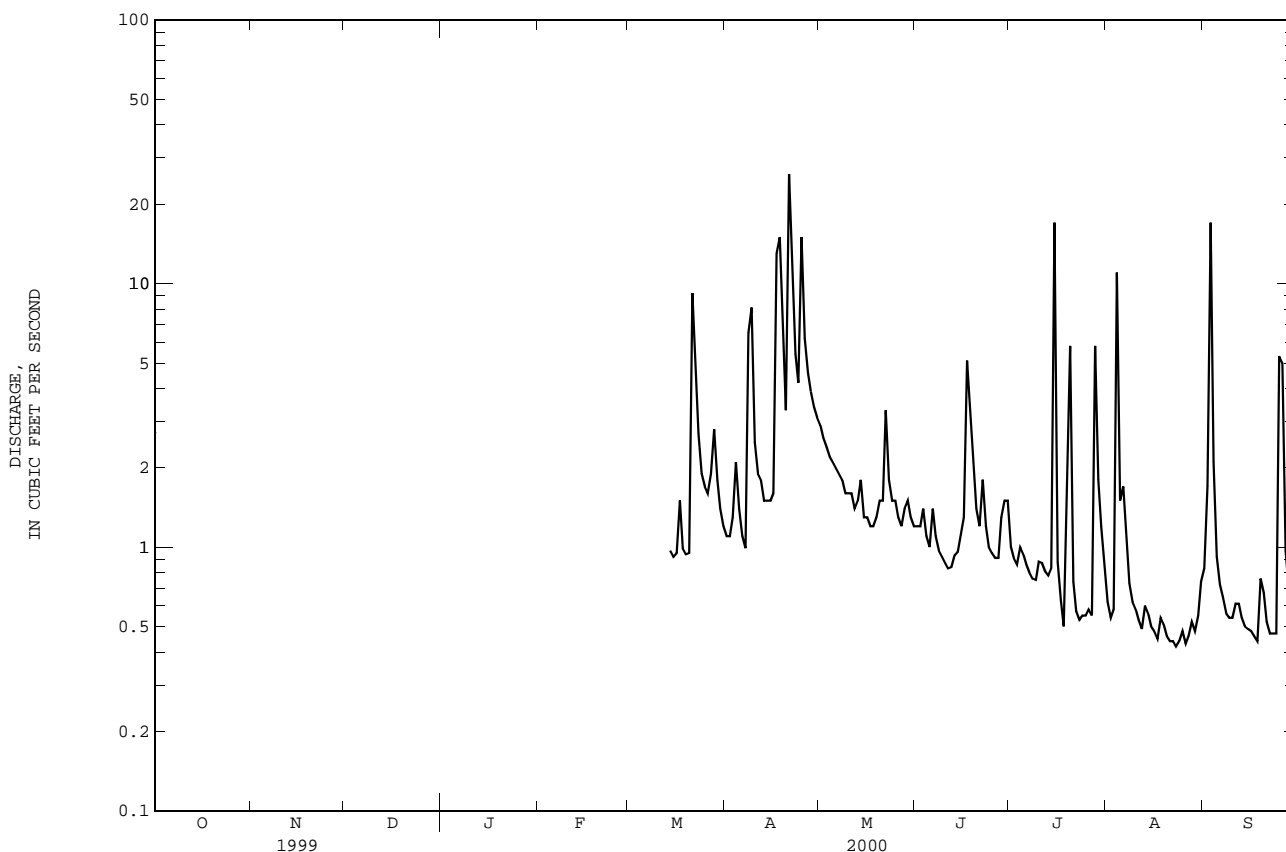
## FOR 2000 WATER YEAR

WATER YEARS 1951 - 1957  
2000

ANNUAL MEAN			2.19	
HIGHEST ANNUAL MEAN			2.99	1953
LOWEST ANNUAL MEAN			1.29	1954
HIGHEST DAILY MEAN	26	Apr 21	77	Nov 21 1952
LOWEST DAILY MEAN	.42	Aug 23	.02	aSep 1 1954
ANNUAL SEVEN-DAY MINIMUM	.44	Aug 20	.02	Sep 1 1954
MAXIMUM PEAK FLOW	260	Jul 15	320	Mar 15 1953
MAXIMUM PEAK STAGE	6.04	Jul 15	b7.07	Mar 15 1953
INSTANTANEOUS LOW FLOW	.73	Jul 8	.00	Jul 3 1956
ANNUAL RUNOFF (CFSM)			.86	
ANNUAL RUNOFF (INCHES)			11.63	
10 PERCENT EXCEEDS	4.9		4.2	
50 PERCENT EXCEEDS	1.1		1.2	
90 PERCENT EXCEEDS	.50		.30	

a Many days in September and October 1954, and July 3, 1956.

b At site and datum then in use.



## POTOMAC RIVER BASIN

01660000 SOUTH BRANCH CHOPAWAMSIK CREEK NEAR GARRISONVILLE, VA--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.56	.40	.53	e.92	1.1	1.1	5.2	1.2	1.6	1.4	.95	3.8
2	.57	.40	.53	e.92	1.1	1.1	4.3	1.1	1.9	2.8	.73	3.8
3	.55	.43	.49	e.94	.99	.99	3.7	1.0	1.3	6.9	.66	4.2
4	.54	.45	.48	e.96	.97	1.2	3.4	.98	1.1	7.1	.57	3.9
5	.55	.44	.48	e.96	1.4	1.8	3.2	.94	2.8	7.4	.66	4.2
6	.56	.45	.48	e.98	1.2	1.4	4.0	.87	1.5	6.7	.44	5.2
7	.53	.44	.49	e.98	1.1	1.3	3.2	.91	1.4	4.7	.39	5.2
8	.48	.43	.50	e1.0	1.0	1.2	2.9	.90	1.2	6.1	.36	5.1
9	.48	.49	.48	e1.0	1.0	1.2	2.9	.89	1.0	5.2	.34	5.2
10	.50	.62	.46	1.1	.99	1.1	2.9	.80	.91	4.9	.50	5.1
11	.46	.49	.45	1.1	.91	1.1	3.8	.71	.80	5.4	.51	5.1
12	.43	.48	.48	1.1	.90	1.1	3.2	.66	.75	4.8	1.1	5.4
13	.40	.46	.44	1.0	1.1	1.7	3.4	.63	.70	4.4	1.5	5.0
14	.36	.54	1.2	1.0	1.1	1.3	2.8	.59	.67	.69	.96	4.3
15	.39	.50	.68	1.1	1.2	1.8	2.8	.58	.74	.43	.59	.54
16	.50	.46	.76	1.1	1.2	2.1	3.0	.58	.97	.38	.45	.28
17	.47	.46	4.6	1.1	2.2	1.6	2.7	.64	.87	.27	.45	.24
18	.45	.44	1.6	1.1	1.4	1.5	2.4	.69	.68	.25	.42	.24
19	.47	.44	1.3	3.7	1.3	1.6	2.1	5.9	.59	.25	.46	.23
20	.50	.45	1.2	4.6	1.3	1.4	2.1	2.4	.53	.23	.47	.27
21	.49	.45	1.2	2.4	1.2	37	1.9	2.2	.53	.21	.44	.29
22	.49	.44	1.1	1.6	1.2	10	1.9	3.5	.69	.19	.37	.29
23	.48	.46	1.0	1.4	1.3	5.6	1.7	3.4	3.9	.19	.39	.28
24	.44	.48	e.96	1.3	1.4	4.6	1.6	1.8	1.5	.18	.48	.87
25	.55	.59	e.94	1.2	1.5	4.1	1.4	3.1	1.1	.16	.39	1.1
26	.51	1.7	e.93	1.1	1.4	3.6	1.3	11	1.0	23	.35	.52
27	.46	.72	e.92	1.1	1.2	3.3	1.3	4.1	.89	2.6	.32	.44
28	.42	.60	e.90	1.0	1.2	3.0	1.2	2.5	.74	.95	.33	.46
29	.40	.55	e.90	1.0	---	11	1.1	1.9	.72	6.2	.33	.47
30	.41	.53	e.90	1.5	---	26	1.2	1.5	.65	3.3	1.5	.46
31	.40	---	e.90	1.3	---	6.8	---	1.2	---	1.4	1.5	---
TOTAL	14.80	15.79	28.28	41.56	33.86	142.59	78.6	59.17	33.73	108.68	18.91	72.48
MEAN	.48	.53	.91	1.34	1.21	4.60	2.62	1.91	1.12	3.51	.61	2.42
MAX	.57	1.7	4.6	4.6	2.2	37	5.2	11	3.9	23	1.5	5.4
MIN	.36	.40	.44	.92	.90	.99	1.1	.58	.53	.16	.32	.23
CFSM	.19	.21	.36	.52	.47	1.80	1.02	.75	.44	1.37	.24	.94
IN.	.22	.23	.41	.60	.49	2.07	1.14	.86	.49	1.58	.27	1.05

## 01660000 SOUTH BRANCH CHOPAWAMSIK CREEK NEAR GARRISONVILLE, VA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1957, 2000 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.04	1.76	1.90	2.34	2.70	5.03	3.90	1.91	1.64	1.47	1.40	1.04
MAX	1.81	5.42	3.71	4.34	4.22	9.37	7.48	3.70	4.12	3.51	6.58	2.42
(WY)	1954	1953	1952	1952	1957	1953	1952	1953	1951	2001	1955	2001
MIN	.23	.40	.79	.88	1.21	3.47	1.77	1.06	.48	.64	.34	.027
(WY)	1955	1955	1956	1955	2001	1954	1954	1957	1954	1953	1953	1954

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

WATER YEARS 1951 - 1957  
2000 - 2001

ANNUAL TOTAL	648.45			
ANNUAL MEAN	1.78		2.12	
HIGHEST ANNUAL MEAN			2.99	1953
LOWEST ANNUAL MEAN			1.29	1954
HIGHEST DAILY MEAN	26	Apr 21	77	Nov 21 1952
LOWEST DAILY MEAN	.36	Oct 14	.16	aSep 1 1954
ANNUAL SEVEN-DAY MINIMUM	.41	Oct 28	.20	Sep 1 1954
MAXIMUM PEAK FLOW			438	Jul 26 2001
MAXIMUM PEAK STAGE			6.77	Jul 26
INSTANTANEOUS LOW FLOW			.15	cJul 18
ANNUAL RUNOFF (CFSM)			.69	.83
ANNUAL RUNOFF (INCHES)			9.42	11.26
10 PERCENT EXCEEDS	3.0		4.2	4.2
50 PERCENT EXCEEDS	.87		.99	1.1
90 PERCENT EXCEEDS	.45		.42	.30

a Many days in September and October 1954, and July 3, 1956.

b At site and datum then in use.

c Also July 24, 25, 26, 2001.

e Estimated.

